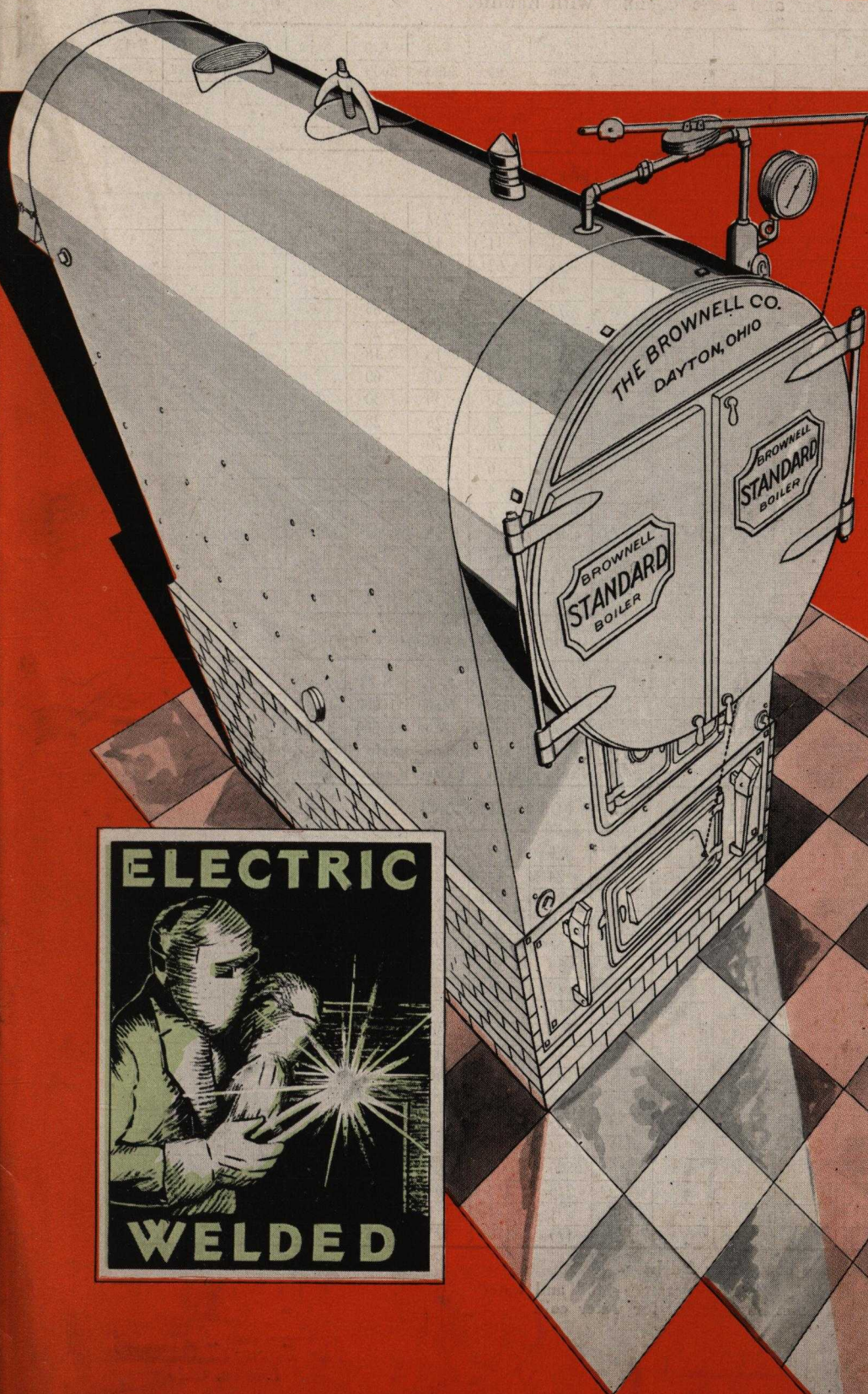


Brownell

STANDARD



Steel Heating BOILERS



Catalog S65

July 1, 1929

Cancels and Supersedes
All Previous Issues

The
BROWNELL Co.
DAYTON, OHIO

BROWNELL STANDARD BOILERS

Smokeless Type

STEAM TRIMMINGS: Consist of Pop Safety Valves, Steam Gauge with Siphon, Water Column complete with Water Gauge, Gauge Cocks and necessary piping, also Automatic Damper Regulator with Lever, Weight and Chain. No TRIMMINGS are furnished with Hot Water Boilers.

FIRING TOOLS: Hoe, Clinker Hook, Slice Bar and Flue Cleaner with handle.

Boiler Number	S-1*	S-2*	S-3*	S-4*	S-5*	S-6*	S-7	S-8	S-9	S-10	S-11	S-12	S-13
Steam Capacity	Sq. Ft. 900	1100	1350	1650	1900	2200	2700	3000	3500	4250	4800	5300	5700
Hot Water Capacity	Sq. Ft. 1440	1760	2160	2640	3040	3520	4320	4800	5600	6800	7680	8480	9120
Code—Steam Boiler	Banka	Babdo	Bafet	Bagol	Bashy	Beano	Beota	Beudy	Bealt	Berts	Becul	Bedor	Belft
Code—Water Boiler	Cadab	Cadis	Cadlo	Cadm	Cadv	Caeb	Caeda	Caecy	Cafga	Cafho	Cafmv	Cafst	Cafur

SPECIFICATIONS

SEE PAGE 10 FOR DIMENSIONS

Heating Surface	Sq. Ft.	76	90	107	124	146	172	207	232	261	322	361	397	428
Grate Area	Sq. Ft.	5.3	6.4	7.5	8.9	10	11.0	11.1	12.3	13.6	14.9	16.4	17.4	17.4
Height of Water Line	In.	50½	50½	55	55	58	58	62¼	62¼	62¼	69¼	69¼	72½	72½
Width of Firebox	In.	18¾	18¾	21¾	21¾	23¾	23¾	29¾	29¾	29¾	35¾	35¾	41¾	41¾
Length of Firebox	In.	40¾	49¾	49¾	58¾	60¾	72¾	66¾	75¾	85¾	75¾	85¾	72½	78½
Diameter of Breeching	In.	12	12	16	16	18	18	20	20	20	22	22	24	24
Diameter of Stack	In.	12	12	16	16	18	18	18	18	18	20	20	22	22
Minimum Height of Stack	Ft.	45	45	55	55	60	60	60	60	60	60	60	70	70
Diameter of Breeching, 2 Boilers	In.	20	20	26	26	28	28	30	30	30	34	34	38	38
Diameter of Stack, 2 Boilers	In.	18	18	24	24	26	26	28	28	28	32	32	34	34
Minimum Height of Stack, 2 Boilers	Ft.	50	50	60	60	65	65	70	70	70	75	75	80	80
Size of Steam Outlet	In.	4	4	4	4	5	5	6	6	6	6	6	8	8
Size of Returns	In.	4	4	4	4	4	4	4	4	4	4	4	4	4
Number and size of Safety Valves	In.	1-1¼	1-1¼	1-1½	1-1½	1-2	1-2	1-2	1-2	1-2	1-2½	1-2½	1-2½	1-2½
Shipping Weight, Approximate	Lbs.	2300	2700	3100	3500	4000	4500	5000	5500	6000	6900	7450	7750	8250
Boiler Covering Required	Sq. Ft.	48	55	64	72	78	88	105	114	124	134	145	151	158
Size of Water Coils	In.	¾	¾	¾	¾	1	1	1	1	1	1¼	1¼	1¼	1¼
**Capacity of Water Coils (gallons per hour)		40	40	40	40	75	75	75	75	75	125	125	125	125

Stack sizes listed herein are minimum and are essential to satisfactory and economical operation

Boiler Number	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27
Steam Capacity	Sq. Ft. 6500	7200	7900	8700	10000	11300	12500	13500	14500	16000	17000	18000	20000	22000
Hot Water Capacity	Sq. Ft. 10400	11500	12600	13920	16000	17970	20000	21600	23200	25600	27200	28800	32000	35200
Code—Steam Boiler	Bemik	Benhi	Benny	Beres	Bhada	Bhabs	Bhafo	Biaba	Biads	Biafo	Biaog	Blama	Blano	Blasy
Code—Water Boiler	Cagar	Cahob	Cahus	Cahto	Caiba	Caid	Caido	Caidy	Caib	Cajbu	Cajmo	Cakos	Cakil	Cakef

SPECIFICATIONS

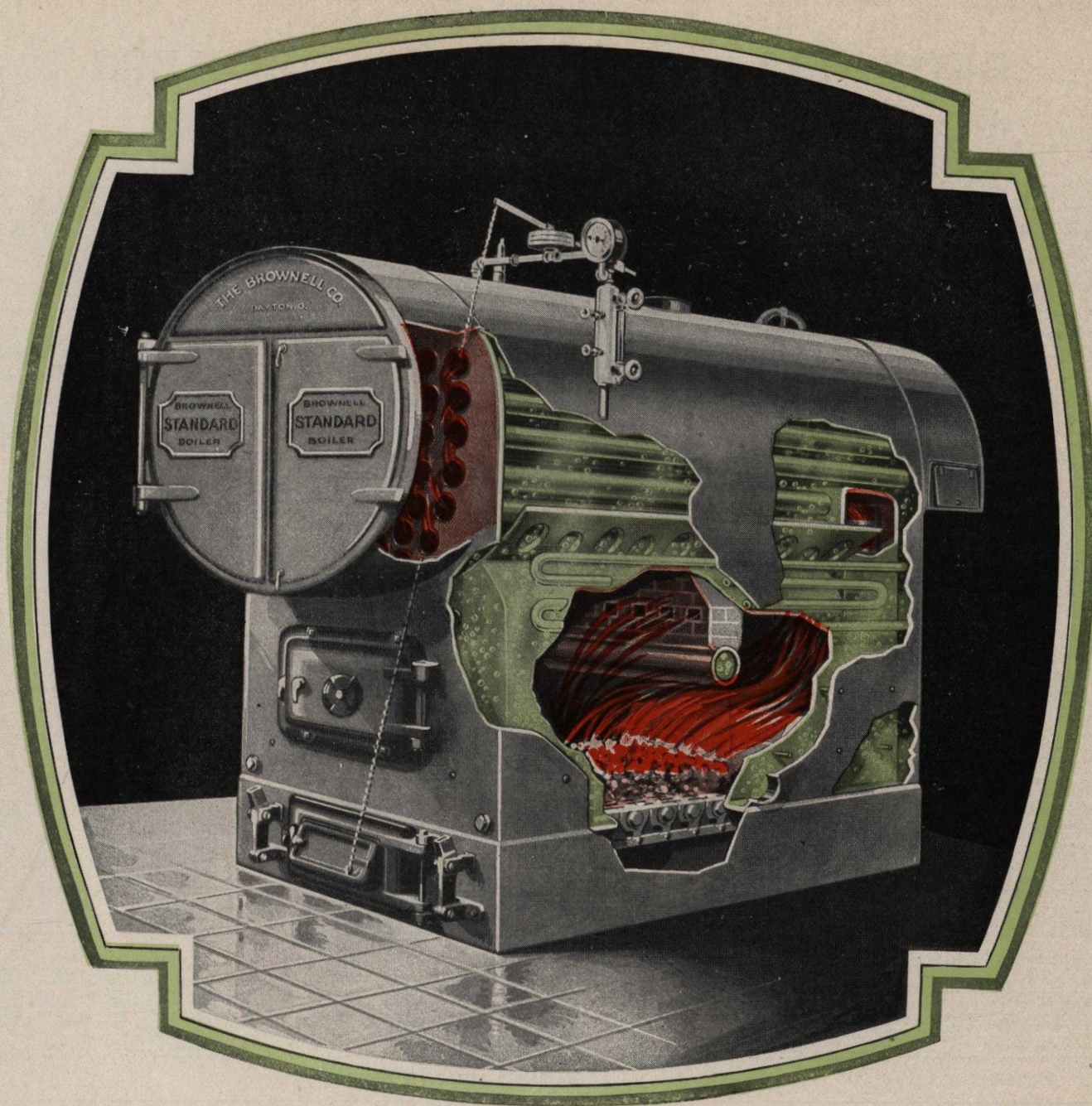
SEE PAGE 10 FOR DIMENSIONS

Heating Surface	Sq. Ft.	469	539	592	646	746	845	929	992	1054	1173	1245	1337	1460	1612
Grate Area	Sq. Ft.	19.1	19.9	21.9	21.9	22.4	22.4	24.8	24.8	27.3	30.0	32.7	35.5	35.8	38.8
Height of Water Line	In.	72½	79½	79½	79½	83¼	83¼	93½	93½	93½	97¼	97¼	97¼	105	105
Width of Firebox	In.	41¾	47¾	47¾	47¾	53¾	53¾	59¾	59¾	59¾	65¾	65¾	65¾	71½	71½
Length of Firebox	In.	86½	76½	84½	92½	87½	99½	87½	93¼	99¼	93¼	99¼	105¼	99½	111¼
Diameter of Breeching	In.	24	26	26	26	28	28	30	30	30	34	34	34	33	38
Diameter of Stack	In.	22	24	24	24	26	26	28	28	28	32	32	32	36	36
Minimum Height of Stack	Ft.	70	70	70	70	75	75	80	80	80	90	90	90	100	100
Diameter of Breeching, 2 Boilers	In.	38	40	40	40	44	44	50	50	50	54	54	54	54	54
Diameter of Stack, 2 Boilers	In.	34	36	36	36	40	40	46	46	46	50	50	50	50	50
Minimum Height of Stack, 2 Boilers	Ft.	80	85	85	85	85	85	90	90	90	95	95	95	100	100
Size of Steam Outlet	In.	8	8	8	8	8	8	10	10	10	10	10	10	12	12
Size of Returns	In.	4	4	4	4	4	4	5	5	5	5	5	5	6	6
Number and Size of Safety Valves	In.	1-3	1-3	1-3	1-3	1-3	1-3	2-2	2-2	2-2½	2-2½	2-2½	2-2½	2-3	2-3
Shipping Weight, Approximate	Lbs.	8750	9750	10350	11000	12000	13500	15500	16000	16500	18500	19250	20000	22500	24000
Boiler Covering Required	Sq. Ft.	168	170	180	191	201	219	226	236	246	261	271	281	299	321
Size of Water Coils	In.	¾	1¼	1¼	1¼	1½	1½	1½	1½	1½	2	2	2	2	2
**Capacity of Water Coils (gals. per hour)		125	125	125	125	175	175	175	175	175	225	225	225	225	225

* These sizes of Boilers contain no Bridge Wall—Grates completely fill base.

** Capacities based on supply water temperature at 40°, outlet temperature 140° and water in boiler 180° F. Suitable Hot Water Storage Tank must be installed for water coil.

The Brownell Company
Dayton, Ohio



The Brownell **STANDARD** *Electric Welded Steel Boiler* Smokeless Type for Coal

Strength and Efficiency at a Reasonable Price

Unusually complete and up-to-date plant facilities, backed by seventy four years experience as a boiler manufacturer, enables the Brownell Company to produce a strictly high grade product at the lowest price commensurate with the well known Brownell standard of quality.

Advanced Design Makes for Economy of Operation

The cost of operating boilers varies. Due to liberal firebox capacity, long heat travel, special tapered water legs that make for rapid circulation, large liberating areas, and other distinctive features, operating costs run low on Brownell Smokeless Welded Steel Boilers. Enables owner to conform to local smoke ordinance.

BROWNELL STANDARD BOILERS

Direct Draft Type

STEAM TRIMMINGS: Consist of Pop Safety Valves, Steam Gauge with Siphon, Water Column complete with Water Gauge, Gauge Cocks and necessary piping, also Automatic Damper Regulator with Lever, Weight and Chain. No TRIMMINGS are furnished with Hot Water Boilers.

FIRING TOOLS: Hoe, Clinker Hook, Slice Bar and Flue Cleaner with handle.

Boiler Number.....	S-100R*	S-101R*	S-101*	S-102*	S-103*	S-104*	S-105*	S-106*	S-107	S-108	S-109	S-110	S-111	S-112	S-113
Steam Capacity.....Sq. Ft.	600	700	900	1100	1350	1650	1900	2200	2700	3000	3500	4250	4800	5300	5700
Hot Water Capacity.....Sq. Ft.	960	1120	1440	1760	2160	2640	3040	3520	4320	4800	5600	6800	7680	8480	9120
Code—Steam Boiler.....	Dofix	Dofom	Deaba	Deaco	Deals	Deamt	Deana	Dears	Defab	Defco	Defgu	Defgy	Degba	Deges	Degre
Code—Water Boiler.....	Eabda	Eabco	Eacos	Eachi	Eadal	Eadso	Eafad	Eafca	Eafcu	Eagat	Eagel	Eagoh	Ealas	Ealet	Ealms

SPECIFICATIONS

SEE PAGE 10 FOR DIMENSIONS

Heating Surface.....Sq. Ft.	51	59	76	90	107	124	146	172	207	232	252	322	361	397	428
Grate Area.....Sq. Ft.	3.6	4.2	5.3	6.4	7.5	8.9	10	11.0	11.1	12.3	13.6	14.9	16.4	17.4	17.4
Height of Water Line.....In.	50½	50½	50½	50½	55	55	58	58	62¼	62¼	62¼	69¼	69¼	72½	72½
Width of Firebox.....In.	18¾	18¾	18¾	18¾	21¾	21¾	23¾	23¾	29¾	29¾	29¾	35¾	35¾	41¾	41¾
Length of Firebox.....In.	27¾	32¾	40¾	49¾	49¾	58¾	60¾	72¾	66¾	75¾	85¾	75¾	85¾	72¾	78¾
Diameter of Breeching.....In.	10	10	12	12	16	16	18	18	20	20	20	22	22	24	24
Diameter of Stack.....In.	10	10	12	12	16	16	18	18	18	18	18	20	20	22	22
Minimum Height of Stack.....Ft.	40	40	45	45	50	50	55	55	55	55	55	55	60	60	65
Diam. of Breeching, 2 Boilers.....In.	16	16	20	20	26	26	28	28	30	30	30	34	34	38	38
Diam. of Stack, 2 Boilers.....In.	15	15	18	18	24	24	26	26	28	28	28	32	32	34	34
Min. Ht. of Stack, 2 Boilers.....Ft.	40	40	45	45	50	60	60	60	65	65	65	70	70	75	75
Size of Steam Outlet.....In.	3	3	4	4	4	4	5	5	6	6	6	6	6	8	8
Size of Returns.....In.	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4
No. and Size of Safety Valves.....In.	1—1¼	1—1¼	1—1¼	1—1¼	1—1½	1—1½	1—2	1—2	1—2	1—2	1—2	1—2½	1—2½	1—2½	1—2½
Shipping Weight, Approx.....Lbs.	1700	1900	2300	2700	100	3500	4000	4500	5000	5500	6000	6900	7450	7750	8250
Boiler Covering Required.....Sq. Ft.	39	42	48	55	64	72	78	88	105	114	124	134	145	151	158
Size of Water Coils.....In.	¾	¾	¾	¾	¾	¾	1	1	1	1	1	1¼	1¼	1¼	1¼
**Cap. of Water Coils (gal. per hr.).....	40	40	40	75	75	75	75	75	75	75	75	125	125	125	125

Stack sizes listed herein are minimum and are essential to satisfactory and economical operation

Boiler Number.....	S-114	S-115	S-116	S-117	S-118	S-119	S-120	S-121	S-122	S-123	S-124	S-125	S-126	S-127
Steam Capacity.....Sq. Ft.	6500	7200	7900	8700	10000	11300	12500	13500	14500	16000	17000	18000	20000	22000
Hot Water Capacity.....Sq. Ft.	10400	11500	12640	13920	16000	17970	20000	21600	23200	25600	27200	28800	32000	35200
Code—Steam Boiler.....	Degmo	Dehco	Deher	Dehil	Delbo	Delce	Delda	Delds	Deldy	Demas	Demet	Demup	Deric	Derox
Code—Water Boiler.....	Ealop	Ealig	Ealam	Eamot	Eamos	Eapac	Eaplo	Earet	Earso	Earab	Earcs	Eargy	Earmi	Easta

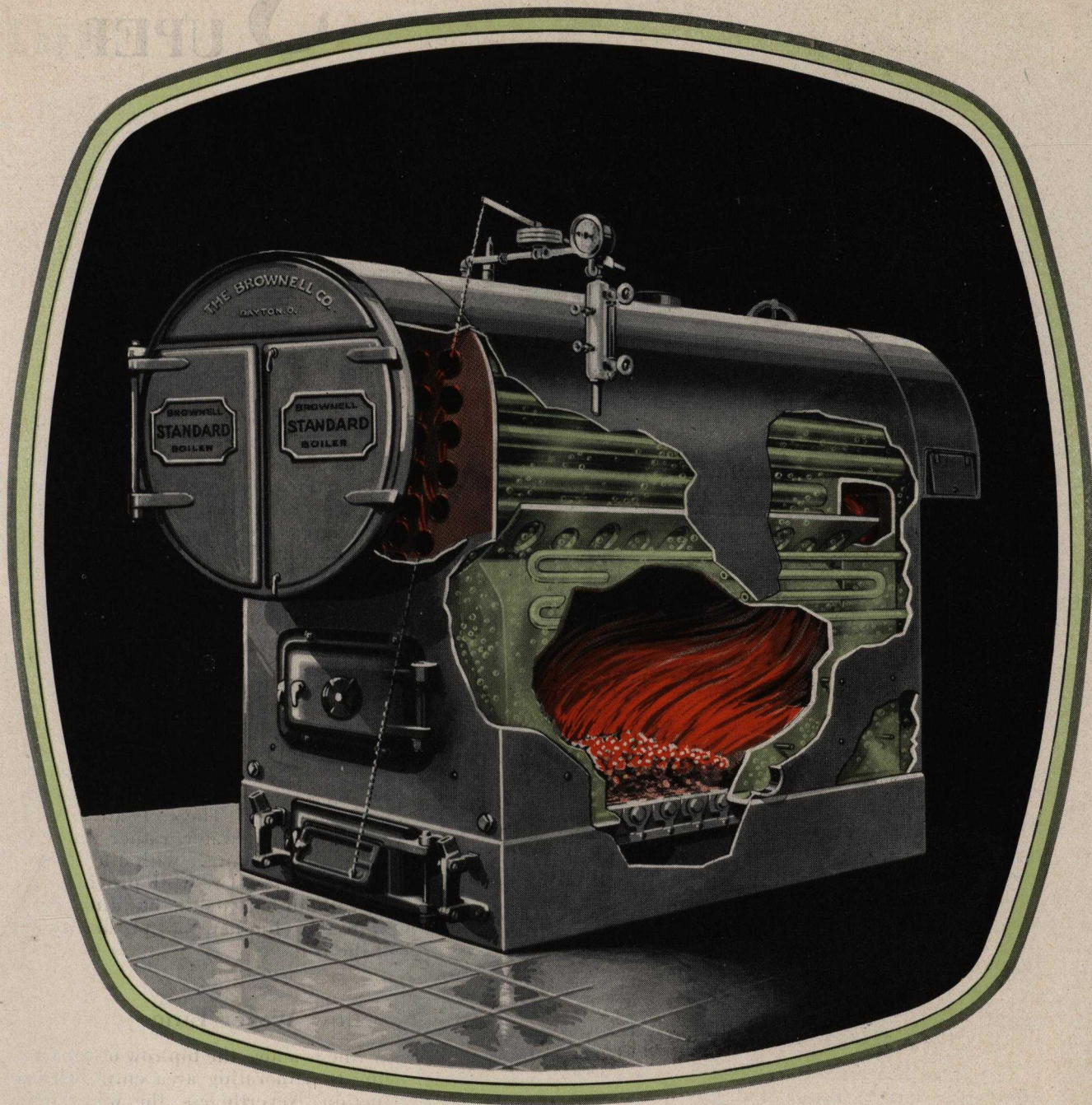
SPECIFICATIONS

SEE PAGE 10 FOR DIMENSIONS

Heating Surface.....Sq. Ft.	469	539	592	646	746	845	929	992	1054	1173	1245	1337	1460	1612
Grate Area.....Sq. Ft.	19.1	19.9	21.9	21.9	22.4	22.4	24.8	24.8	27.3	30.0	32.7	35.5	35.8	38.8
Height of Water Line.....In.	72½	79½	79½	79½	83¼	83¼	93½	93½	93½	97¼	97¼	97¼	105	105
Width of Firebox.....In.	41¾	47¾	47¾	47¾	53¾	53¾	59½	59½	59½	65½	65½	65½	71½	71½
Length of Firebox.....In.	86½	76½	84½	92½	87½	99½	87¼	93¼	99¼	93¼	99¼	105¼	99¼	111¼
Diameter of Breeching.....In.	24	26	26	26	28	28	30	30	30	34	34	34	38	38
Diameter of Stack.....In.	22	24	24	24	26	26	28	28	28	32	32	32	36	36
Minimum Height of Stack.....Ft.	70	70	70	70	75	75	80	80	80	90	90	90	100	100
Diameter of Breeching, 2 Boilers.....In.	38	40	40	40	44	44	50	50	50	54	54	54	54	54
Diameter of Stack, 2 Boilers.....In.	34	36	36	36	40	40	46	46	46	50	50	50	50	50
Minimum Height of Stack, 2 Boilers.....Ft.	80	85	85	85	85	85	90	90	90	95	95	95	100	100
Size of Steam Outlet.....In.	8	8	8	8	8	8	10	10	10	10	10	10	12	12
Size of Returns.....In.	4	4	4	4	4	4	5	5	5	5	5	5	6	6
Number and Size of Safety Valves.....In.	1—3	1—3	1—3	1—3	1—3	1—3	2—2	2—2	2—2½	2—2½	2—2½	2—2½	2—3	2—3
Shipping Weight, Approximate.....Lbs.	8750	9750	10350	11000	12000	13500	15500	16000	16500	18500	19250	20000	22500	24000
Boiler Covering Required.....Sq. Ft.	168	170	180	191	201	219	226	236	246	261	271	281	299	321
Size of Water Coils.....In.	1¼	1¼	1¼	1¼	1½	1½	1½	1½	1½	2	2	2	2	2
**Capacity of Water Coils (gals. per hour).....	125	125	125	125	175	175	175	175	175	225	225	225	225	225

* These sizes of Boilers contain no Bridge Wall—Grates completely fill base.

** Capacities based on supply water temperature at 40°, outlet temperature 140° and water in boiler 180° F. Suitable Hot Water Storage Tank must be installed for water coil.



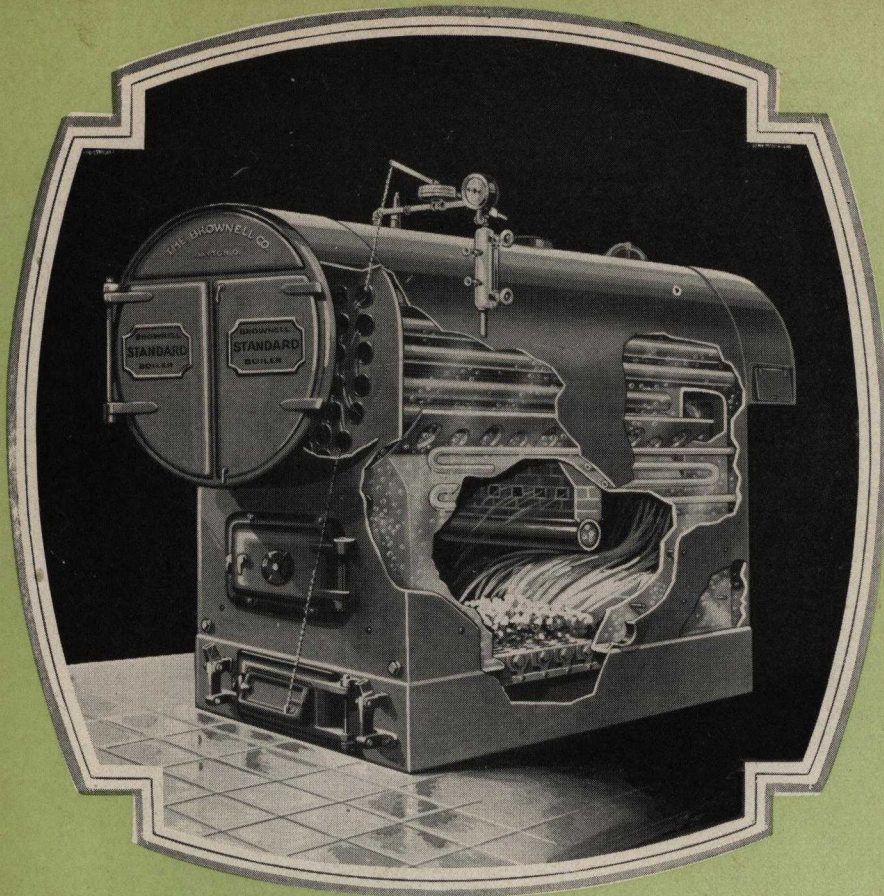
The Brownell STANDARD Electric Welded Steel Boiler

Direct Draft Type for Coal

The Brownell STANDARD Welded Steel Boiler is a multiple-pass boiler of the direct draft type, of most advanced design. It is a fast, economical steamer due to its large firebox, large liberating area, free circulating system and the Special Brownell tapered water legs. Easily inspected, cleaned or repaired.

The Brownell STANDARD Boiler is readily adapted to Stoker firing and is furnished in the usual capacities. This boiler is a multiple-feature unit—an efficient heater, and provides domestic hot water service in all seasons. When hand fired with either anthracite or coke it will comply with any city smoke ordinance.

SUPERIOR NE



up through the water legs, gaining in heat as it rises, the gradually widening water legs allow for the expansion. The tapered water legs, in connection with the liberal water passages throughout, assist greatly in assuring a free, unimpeded circulation of water.

Service Coils in the Water Legs

Office buildings, institutions, apartments and homes all require hot water service the year round, although there are seasons when they do not require heat. In the Brownell STANDARD Boiler this condition is met by installing service coils in the upper part of the tapered water legs. The coils are heated by immersion in the hot water, rather than by having them in direct contact with the flame. In warm weather a low fire will provide hot water service without heating the building. This unique feature also eliminates all possibility of burning out the coils.

Long Gas Travel

The Brownell STANDARD is a 3-pass boiler. The heat passes to the rear, forward and back—three passes in all—resulting in high efficiency and low stack temperature. The temperature of the volatile gases is raised in passing thru ports in the ignition arch and over the live coals in rear of arch, thereby insuring complete combustion and elimination of smoke.

Note the interior construction showing how the tapered water legs add great strength to the self-supporting crown sheet

A Quick Steamer, Easy to Fire

The large heating area and the rapid water circulation insures rapid heat absorption and quick steaming.

Large Liberating Area

The steam liberating area in the Brownell STANDARD Boiler is considerably greater than in the general run of boilers, thereby materially increasing the efficiency of the boiler and insuring dry steam and a steadier water line.

Tapered Water Legs

Here you have a distinctive Brownell feature. As the temperature rises the water expands. Consequently, as the water passes

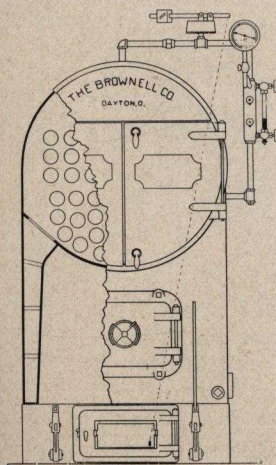
Low Water Line

The water line is above the top row of the fire tubes, leaving the liberating area entirely free from obstruction. Nevertheless, the water line stands closer to the floor line than is usual in boilers of this type. This feature makes the Brownell STANDARD Boiler particularly suitable for buildings with low basements as it prevents water logging of radiators on the lower floor.

Double Section Grates and Large Combustion Chamber

A large combustion chamber is a feature of the Brownell STANDARD. This provides a greater radiating surface and insures better combustion. This large firebox makes it easier to enter the boiler to clean, inspect or repair.

The grates are built in two sections, front and rear, except in the smaller sizes. Each section is composed of easily removable bars.



W FEATURES YOU'LL APPRECIATE IN

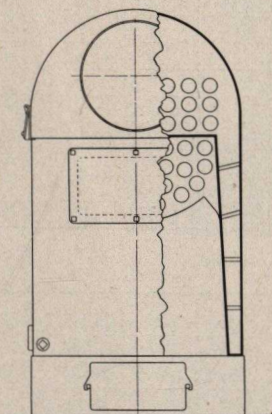
Brownell

Electric Welded Steel

Boilers

Both of these features make for economy when partial replacement of the grate becomes necessary.

The bars of the Brownell grate are extra heavy, of a special grade of iron, and available in various designs, each adaptable to use of some particular grade of coal. Another feature of worth, particularly in mild weather, is the fact that by allowing the rear section to cover over with ashes a slow fire can be maintained in the front half of the firebox only—just enough heat to take off the chill and provide hot water service.

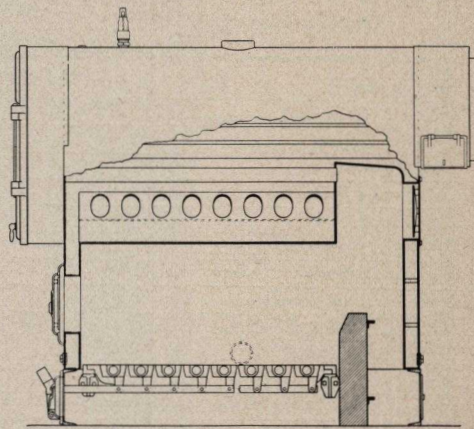


Note how the water legs are tapered to allow for expansion of the water as it contacts the heating surface of the firebox, also how the water coil is installed vertically.

Design of Unusual Strength

The one-piece crown sheet is another distinctive feature of the Brownell STANDARD Boiler. This crown sheet extends from one outside sheet to the

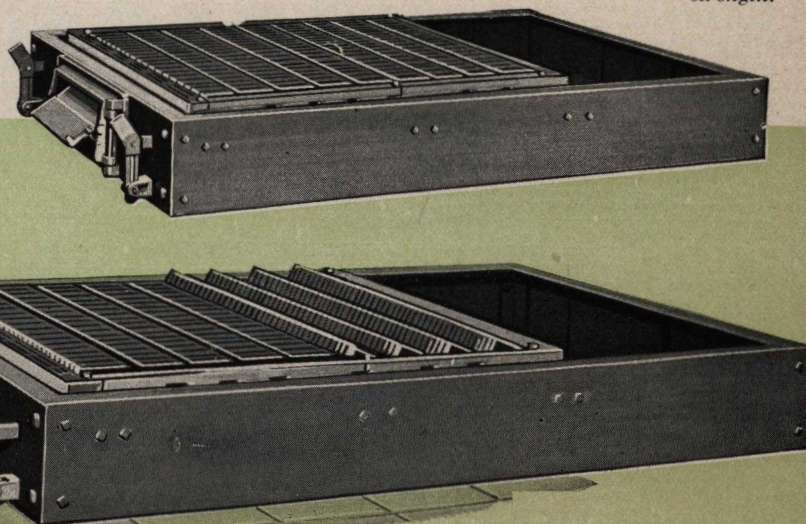
other outside sheet and is welded thereto throughout its entire length, making it self-supporting. In addition, the side sheets of the firebox are welded to the crown sheet which adds still additional strength and rigidity to the crown sheet.



Accessibility of Tubes and Parts

An extra entrance, in addition to the usual front doors, is provided in the rear, immediately below the smoke connection and directly opposite the rear tubes. In this way Brownell makes all fire tubes equally accessible for both front and rear inspection and repair. All other parts are equally accessible.

Note the great number of openings in the self-supporting crown sheet which allow free circulation. The crown sheet is solidly welded to the one piece wrapper sheet accomplishing unrivaled strength.



BROWNELL STANDARD BOILERS

For Stoker, Oil or Gas Firing

STEAM TRIMMINGS: Consist of Pop Safety Valves, Steam Gauge with Siphon, Water Column complete with Water Gauge, Gauge Cocks and necessary piping, also Automatic Damper Regulator with Lever, Weight and Chain.

No TRIMMINGS are furnished with Hot Water Boilers.

FIRING TOOLS: Hoe, Clinker Hook, Slice Bar and Flue Cleaner with handle.

Boiler Number	S-250R	S-251R	S-251	S-252	S-253	S-254	S-255	S-256	S-257	S-258	S-259	S-260	S-261	S-262	S-263
Steam Capacity.....Sq. Ft.	850	950	1100	1400	1700	2000	2300	2700	3250	3650	4200	5000	5650	6200	6700
Hot Water Capacity.....Sq. Ft.	1360	1520	1760	2240	2720	3200	3680	4320	5200	5840	6720	8000	9040	9920	10720
Code—Steam Boiler	Famos	Famix	Fabda	Fabet	Fabom	Facet	Facis	Facot	Facul	Fadat	Fadre	Fadas	Fadeg	Fadla	Fadmo
Code—Water Boiler	Gatum	Gatof	Gabab	Gabdo	Gabst	Gabex	Gador	Gadis	Gadla	Gaert	Gaesa	Gafos	Gafgy	Gafel	Gafo

SPECIFICATIONS

SEE PAGE 10 FOR DIMENSIONS

Heating Surface.....Sq. Ft.	51	59	76	90	107	124	146	172	207	232	252	322	361	397	428
Height of Water Line.....In.	50 1/2	50 1/2	50 1/2	50 1/2	55	55	58	58	62 1/4	62 1/4	62 1/4	69 1/4	69 1/4	72 1/2	72 1/2
Width of Firebox.....In.	18 3/4	18 3/4	18 3/4	18 3/4	21 3/4	21 3/4	23 3/4	23 3/4	29 3/4	29 3/4	29 3/4	35 3/4	35 3/4	41 3/4	41 3/4
Length of Firebox.....In.	27 3/4	32 3/4	40 3/4	49 3/4	49 3/4	58 3/4	60 3/4	72 3/4	66 3/4	75 3/4	85 3/4	75 3/4	85 3/4	72 3/4	78 3/4
Diameter of Breeching.....In.	10	10	12	12	16	16	18	18	20	20	20	22	22	24	24
Diameter of Stack.....In.	10	10	12	12	16	16	18	18	18	18	18	20	20	22	22
Minimum Height of Stack.....Ft.	40	40	45	45	50	50	55	55	55	55	55	55	60	60	65
Diam. of Breeching, 2 Boilers.....In.	16	16	20	20	26	26	28	28	30	30	30	34	34	38	38
Diam. of Stack, 2 Boilers.....In.	15	15	18	18	24	24	26	26	28	28	28	32	32	34	34
Min. Ht. of Stack, 2 Boilers.....Ft.	40	40	45	45	50	60	60	60	65	65	65	70	70	75	75
Size of Steam Outlet.....In.	3	3	4	4	4	4	5	5	6	6	6	6	6	8	8
Size of Returns.....In.	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4
No. and Size of Safety Valves.....In.	1-1 1/4	1-1 1/4	1-1 1/4	1-1 1/4	1-1 1/2	1-1 1/2	1-2	1-2	1-2	1-2	1-2	1-2 1/2	1-2 1/2	1-2 1/2	1-2 1/2
Shipping Weight, Approx.....Lbs.	1500	1650	2050	2400	2700	3050	3500	3950	4450	4900	5300	6150	6650	6850	7350
Boiler Covering Required.....Sq. Ft.	39	42	48	55	64	72	78	88	105	114	121	134	145	151	158
Size of Water Coils.....In.	3/4	3/4	3/4	3/4	3/4	3/4	1	1	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4
**Cap. of Water Coils (gal. per hr.)	40	40	40	40	40	40	75	75	75	75	75	125	125	125	125

Stack sizes listed herein are minimum and are essential to satisfactory and economical operation

Boiler Number	S-264	S-265	S-266	S-267	S-268	S-269	S-270	S-271	S-272	S-273	S-274	S-275	S-276	S-277
Steam Capacity.....Sq. Ft.	7500	8500	9500	10500	11600	13000	14400	15400	16400	18200	19300	21000	23000	25000
Hot Water Capacity.....Sq. Ft.	12000	13600	15200	16800	18600	20800	23000	24600	26200	29100	30900	33600	36800	40000
Code—Steam Boiler	Fadil	Fafba	Fafco	Fagit	Fagar	Fagis	Fagam	Fagel	Fakab	Fakos	Faket	Falat	Falmo	Falsa
Code—Water Boiler	Gagoc	Gagat	Galom	Galst	Galer	Gamas	Gamet	Gamol	Gamic	Gapos	Gapat	Gaxil	Garot	Gaslo

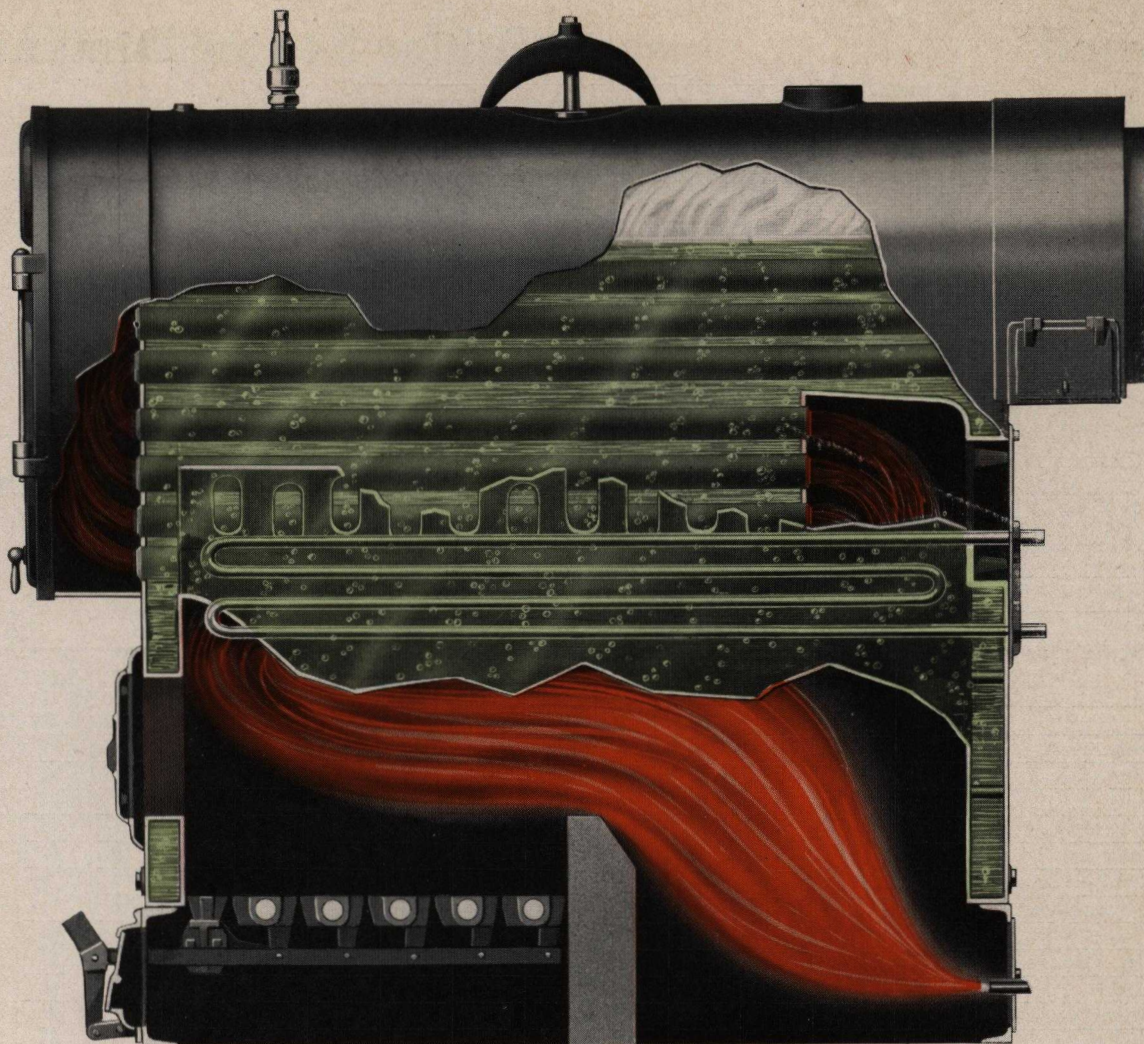
SPECIFICATIONS

SEE PAGE 10 FOR DIMENSIONS

Heating Surface.....Sq. Ft.	469	539	592	646	746	845	929	992	1054	1173	1245	1337	1460	1612
Height of Water Line.....In.	72 1/2	79 1/2	79 1/2	79 1/2	83 1/4	83 1/4	93 1/2	93 1/2	93 1/2	97 1/4	97 1/4	97 1/4	105	105
Width of Firebox.....In.	41 3/4	47 3/4	47 3/4	47 3/4	53 3/4	53 3/4	59 1/2	59 1/2	59 1/2	65 1/2	65 1/2	65 1/2	71 1/2	71 1/2
Length of Firebox.....In.	86 1/2	76 1/2	84 1/2	92 1/2	87 1/2	99 1/2	87 1/4	93 1/4	99 1/4	93 1/4	99 1/4	105 1/4	99 1/4	111 1/4
Diameter of Breeching.....In.	24	26	26	26	28	28	30	30	30	34	34	34	38	38
Diameter of Stack.....In.	22	24	24	24	26	26	28	28	28	32	32	32	36	36
Minimum Height of Stack.....Ft.	70	70	70	70	75	75	80	80	80	90	90	90	100	100
Diameter of Breeching, 2 Boilers.....In.	38	40	40	40	44	44	50	50	50	54	54	54	54	54
Diameter of Stack, 2 Boilers.....In.	34	36	36	36	40	40	46	46	46	50	50	50	50	50
Minimum Height of Stack, 2 Boilers.....Ft.	80	85	85	85	85	85	90	90	90	95	95	95	100	100
Size of Steam Outlet.....In.	8	8	8	8	8	8	10	10	10	10	10	10	12	12
Size of Returns.....In.	4	4	4	4	4	4	5	5	5	5	5	5	6	6
Number and Size of Safety Valves.....In.	1-3	1-3	1-3	1-3	1-3	1-3	2-2	2-2	2-2 1/2	2-2 1/2	2-2 1/2	2-2 1/2	2-3	2-3
Shipping Weight, Approximate.....Lbs.	7600	8550	9050	9700	10650	12200	14000	14500	14600	16700	17250	18000	20300	21700
Boiler Covering Required.....Sq. Ft.	168	170	180	191	201	219	226	236	246	261	271	281	299	321
Size of Water Coils.....In.	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2	2	2	2	2
**Capacity of Water Coils (gals. per hour)	125	125	125	125	175	175	175	175	175	225	225	225	225	225

No Grates, Bridge Wall or Supports for same are furnished with these Boilers unless so ordered.

** Capacities based on supply water temperature at 40°, outlet temperature 140° and water in boiler 180° F. Suitable Hot Water Storage Tank must be installed for water coil.



The Brownell STANDARD Electric Welded Steel Boiler for OIL or GAS

Can Be Used as an Oil- Burning Boiler

The Brownell STANDARD Boiler lends itself to oil or gas firing. When burning coal both sections of the grate are required. When burning oil or gas the rear grate is removed to accommodate the oil or gas burner.

It is not necessary to remove both grates for oil or gas. The front grate can remain in and be instantly available for coal burning, should anything happen to the oil supply.

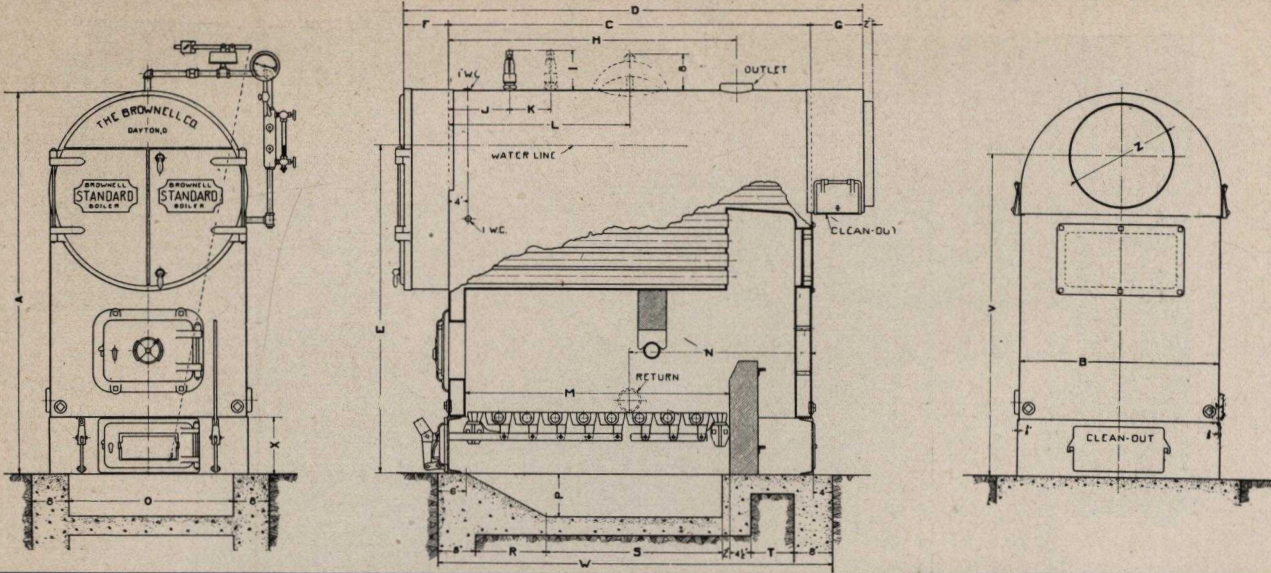
Both coal and oil, or gas, may be used for fuel simultaneously when desired—coal in front and oil or gas in rear.

Features That Eliminate Accessories

When the Brownell STANDARD Boiler is used as an oil or gas burner the front of the double grate section may be used as a garbage incinerator. This makes an inexpensive method of garbage disposal and saves the price of an auxiliary incinerator.

The cost of the auxiliary water heater is also saved. The location of the water coils in the water legs of the Brownell STANDARD Boiler provide hot water service the year round. In warm weather a low fire, either of coal, gas or oil, will heat these coils easily without heating the entire building.

Brownell **STANDARD** Boiler Setting Dimensions



Boiler Number.....	S-100R S-250R	S-101R S-251R	S-1 S-201	S-2 S-202	S-3 S-203	S-4 S-204	S-5 S-205	S-6 S-206	S-7 S-207	S-8 S-208	S-9 S-209	S-10 S-210	S-11 S-211	S-12 S-212	S-13 S-213
A—Height of Boiler.....	In. 56	56	56	56	61½	61½	66	66	74	74	74	81	81	87	87
B—Width of Boiler.....	In. 24	24	24	24	27	27	30	30	36	36	36	42	42	48	48
C—Length of Boiler.....	In. 34	39	47	56	56	65	68	80	74	83	93	83	93	80	86
D—Length of Boiler overall.....	In. 49¾	54¾	62¾	71¾	72¾	81¾	84¾	96¾	93½	102½	112½	103½	113½	103½	109½
E—Height of Water Line.....	In. 50½	50½	50½	50½	55	55	58	58	62½	62½	62½	69½	69½	72½	72½
F—Depth of Front Smokehood.....	In. 7¾	7¾	7¾	7¾	7¾	7¾	7¾	7¾	8½	8½	8½	9½	9½	9½	9½
G—Depth of Rear Smokehood.....	In. 8	8	8	8	9	9	9	9	11	11	11	11	11	14	14
H—Location of Steam Outlet.....	In. 17	19½	23½	28	28	32½	34	40	37	41½	46½	41½	46½	40	43
I—Height of Safety Valve.....	In. 7	7	7	7	8	8	9	9	9	9	9	11	11	11	11
M—Length of Grates.....	In. 27¾	32¾	40¾	49¾	49¾	58¾	60¾	72¾	54	60	66	60	66	60	60
N—Location, Return Openings.....	In. 17	19½	23½	28	28	32½	34	40	37	41½	46½	41½	46½	40	43
O—Width of Ash Pit.....	In. 17	17	17	17	20	20	23	23	29	29	29	35	35	41	41
P—Sug. Depth of Ash Pit.....	In. 6	6	6	6	6	6	6	6	9	9	9	9	9	9	9
R—Foundation Dimension.....	In. 8	8	8	8	8	8	8	8	15	15	15	15	15	15	15
S—Foundation Dimension.....	In. 15	20	28	37	37	46	48½	60½	34½	40½	49½	40½	46½	40½	40½
V—Ht. Center Smoke Connec.....	In. 49¾	49¾	49¾	49¾	53¾	53¾	56¾	56¾	63	63	63	68	68	73¾	73¾
W—Length of Foundation.....	In. 40	45	53	62	62	71	74	86	80	89	99	89	99	86	92
X—Height of Base.....	In. 12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Z—Diam. Smoke Connection.....	In. 10	10	12	12	16	16	18	18	20	20	20	22	22	24	24

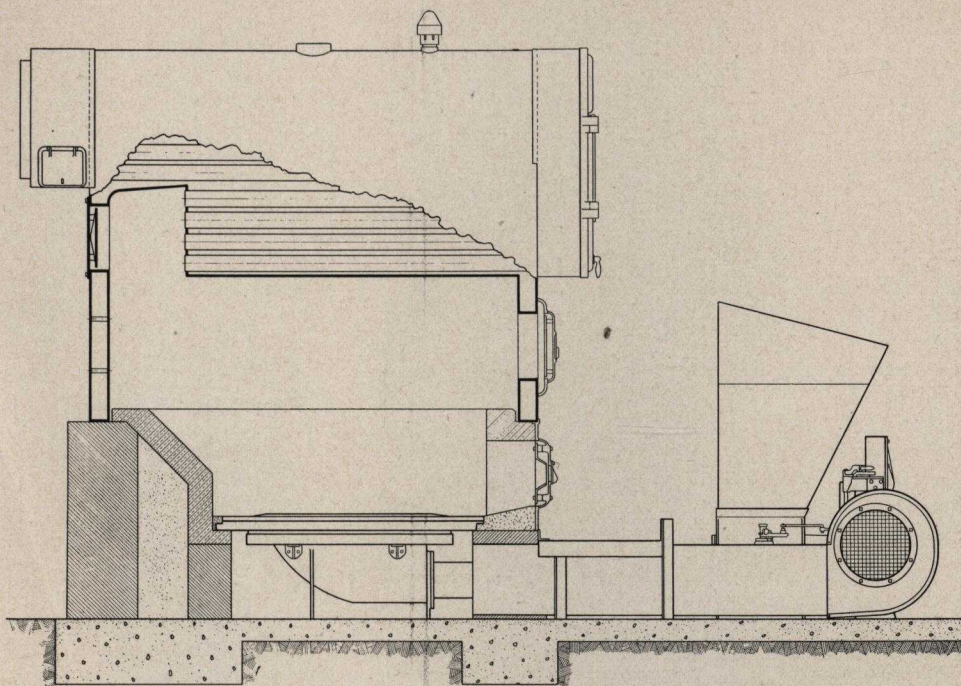
Depth of foundation depends on nature of soil.

Boiler Number.....	S-14 S-264	S-15 S-265	S-16 S-266	S-17 S-267	S-18 S-268	S-19 S-269	S-20 S-270	S-21 S-271	S-22 S-272	S-23 S-273	S-24 S-274	S-25 S-275	S-26 S-276	S-27 S-277
A—Height of Boiler.....	In. 87	93	93	93	100	100	111	111	111	118	118	118	126	126
B—Width of Boiler.....	In. 48	54	54	54	60	60	66	66	66	72	72	72	78	78
C—Length of Boiler.....	In. 94	84	92	100	95	107	95	101	107	101	107	115	107	119
D—Length of Boiler Overall.....	In. 117½	109½	117½	125½	120½	132½	122½	128½	134½	128½	134½	142½	140½	152½
E—Height of Water Line.....	In. 72½	79½	79½	79½	83½	83½	93½	93½	93½	97½	97½	97½	105	105
F—Depth of Front Smokehood.....	In. 9½	10½	10½	10½	10½	10½	11½	11½	11½	11½	11½	11½	13½	13½
G—Depth of Rear Smokehood.....	In. 14	15	15	15	15	15	16	16	16	16	16	16	20	20
H—Location of Steam Outlet.....	In. 47	62	70	75	72	81	72	76	81	76	81	85	81	90
I—Height of Safety Valve.....	In. 13	13	13	13	13	13	9	9	11	11	11	11	13	13
M—Length of Grates.....	In. 66	60	66	66	60	60	60	60	66	66	72	78	72	78
N—Location of Return Openings.....	In. 47	42	46	50	47½	53½	47½	50½	53½	50½	53½	56½	53½	59½
O—Width of Ash Pit.....	In. 41	47	47	47	53	53	59	59	59	65	65	65	71	71
P—Suggested Depth of Ash Pit.....	In. 9	12	12	12	12	12	12	12	12	12	12	12	12	12
R—Foundation Dimension.....	In. 15	18	18	18	18	18	18	18	18	18	18	18	18	18
S—Foundation Dimension.....	In. 46½	37½	43½	43½	37½	37½	37¾	37¾	43¾	43¾	49¾	57¾	49¾	55¾
V—Height Center Smoke Connection.....	In. 73½	77	77	77	82	82	91½	91½	91½	97	97	97	105	105
W—Length of Foundation.....	In. 100	90	98	106	101	113	101	107	113	107	113	121	113	125
X—Height of Base.....	In. 12	12	12	12	12	12	15	15	15	15	15	15	15	15
Z—Diameter Smoke Connection.....	In. 24	26	26	26	28	28	30	30	30	34	34	34	38	38

* Hot Water Boiler dimensions are the same as for Steam Boilers.

The Brownell Company
Dayton, Ohio

Automatic Heat--- Uniform Temperatures



Brownell STANDARD Electric-Welded Boilers can be operated with Brownell Type A-1 Automatic Underfeed Stokers and when so equipped develop still greater efficiency than could be possible when hand-fired. The cost of a Brownell Stoker is small as compared with the savings obtained. In fact, a boiler, to be completely modern, should be stoker-equipped.

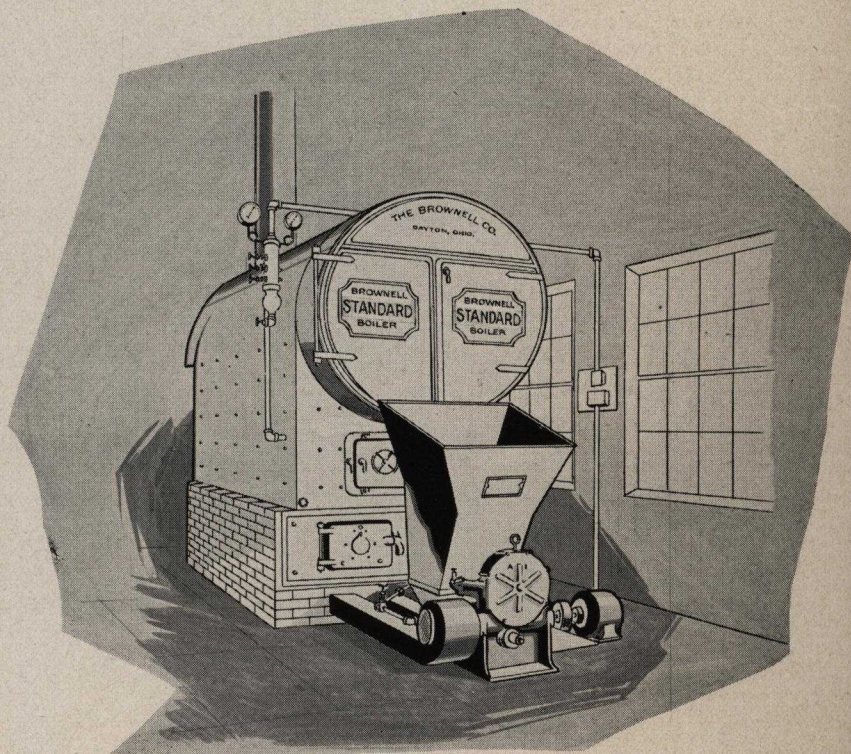
Drawing of a Brownell STANDARD Boiler with a Brownell Underfeed Stoker attached.

NO ALIBIS

The Customer who buys both boiler and stoker of the Brownell Company centers all responsibility for the successful operation of his heating plant in one long established concern. Should anything "go wrong" there can be no opportunity for an alibi.

Brownell Boilers and Stokers are not "assembled" products. On the contrary, they are built in their entirety at the Brownell plant by engineers and workmen long experienced in the designing and construction of boiler room equipment.

Brownell Type A-1 Automatic Underfeed Stokers appear in the illustrations on this page and are representative of the complete Brownell line.



Brownell STANDARD Boiler with Brownell Underfeed Stoker Installed.

MATERIAL AND DESIGN

From castings to shaker arms, every piece of material in Brownell Boilers is produced complete in the Brownell plant, and is heavier material than is found in most other makes. If the best of materials and up-to-dateness of design mean anything, long life of the Brownell STANDARD Boiler is assured.

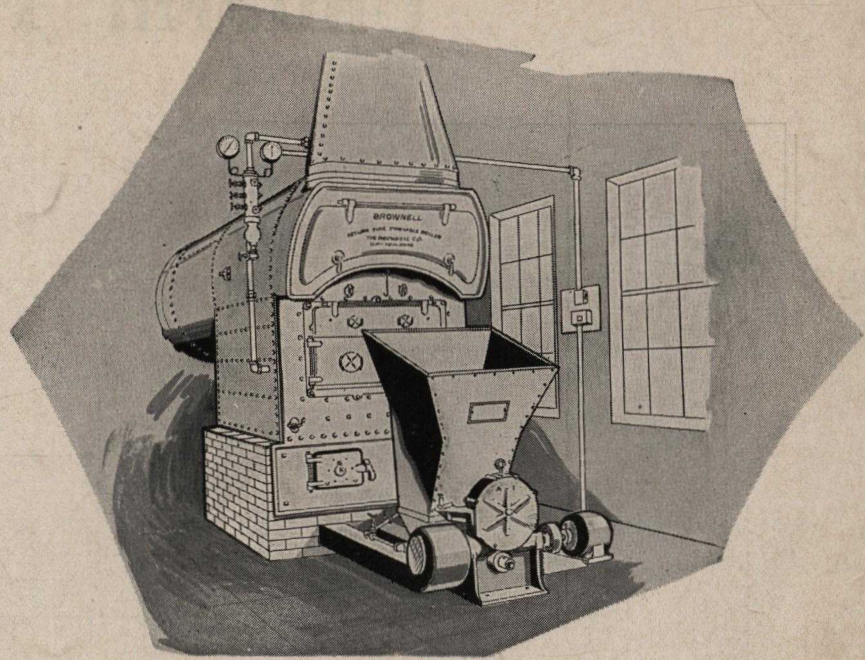
Brownell Welded Boilers have, in fact, been tested under 100 lbs. pressure without leaking or showing any damage to any part—although sold under the A.S.M.E. Code for use not to exceed 15 lbs. pressure.

INSPECTION

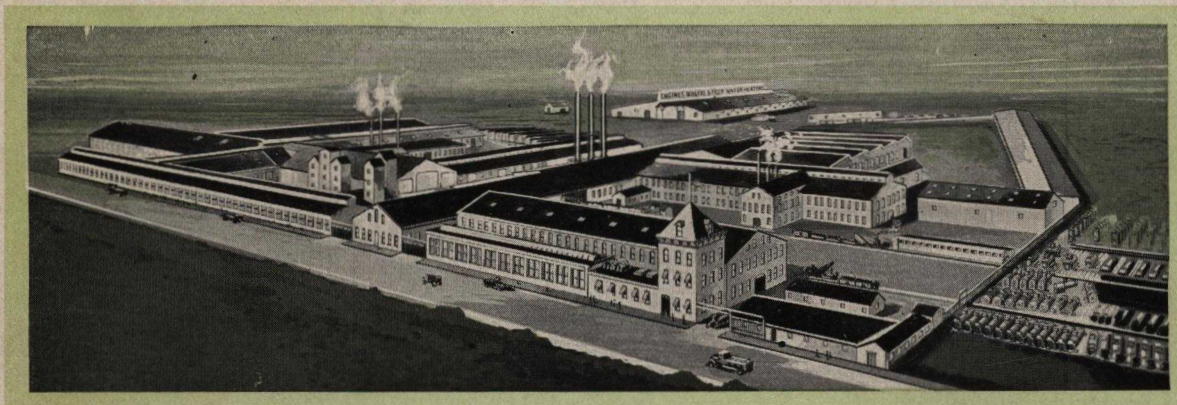
The design, material and workmanship of Brownell Boilers are in strict conformity with the A.S.M.E. code regulations. One of the most prominent steam boiler insurance companies keeps a man stationed at the factory to check each boiler accordingly. This man is *not* an employee of the Brownell Co., nor is he in any way responsible to the Brownell Co. After he inspects and passes a boiler, according to the code, it is marked with the A.S.M.E. stamp of approval.

GUARANTEE

Each Brownell Boiler is guaranteed for a period of one year from the date of installation. Any part, or parts, that might be found defective through imperfections in material and workmanship during the first year of service will be replaced without charge by the Brownell Company. Replacements and service made necessary through misuse, carelessness or neglect on the part of the owner or operator are not covered by this guarantee.



Here is one of the many boilers of riveted steel construction built by Brownell—a Return Flue Portable Firebox Boiler. This illustration also shows how it can be equipped with a Brownell Type A-1 Underfeed Stoker.



Plant of The Brownell Co., Dayton, Ohio, U. S. A.

The Brownell Company is the only firm manufacturing both Boilers and Stokers. They started to build boiler room equipment in 1855, when Lincoln was still a country lawyer, and they have been at it ever since. Brownell products are now shipped to every part of the civilized world.